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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,502	09/25/2001	Tetsuharu Tanaka	107348-00119	5501

4372 7590 09/25/2003

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EXAMINER

BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/856,502

Applicant(s)

TANAKA ET AL

Examiner

Jennifer A Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,6 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6 and 11-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed July 7, 2003, have been entered and have been carefully considered. Claims 1 and 6 have been amended, claims 12 and 13 have been added and claims 1, 6 and 11 - 13 are pending. The Examiner withdraws the 35 U.S.C. 112, 2<sup>nd</sup> paragraph rejection of claims 1 and 11 as set forth in paragraphs 1 - 2 of the previous Office Action dated April 7, 2003. In view of Applicant's arguments, the Examiner withdraws the rejection of claims 1, 6 and 11 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) rejection as obvious over Nelson (US 6,194,329) as set forth in the previous Office Action dated April 7, 2003. After an updated search, the invention as currently claimed is not found to be patentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 is indefinite because the relationship between the temperature of the skin when exposed to a heat source and the temperature of the heat source is unclear. In order to make a comparison, the Examiner must know the type of heat source, or preferably, the temperature of the heat source so the comparison between the skin and the heat source can be made.

Additionally, when is the temperature of the skin measured - is it measured upon immediate exposure of the heat source or after long-term exposure to the heat source? For the purposes of examination at this time, the Examiner will assume if the structural and chemical limitations of the skin are met as set forth in claim 1, the heat resistant property as stated in claim 12 will be met.

***Claim Rejections - 35 USC § 103***

5. Claims 1, 6, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita et al.(US 4,781,976).

Fujita et al. is directed to a skin covering for trims of automobiles.

As to claim 1, Fujita teaches that the skin covering comprises a surface layer, a foam layer and a back layer (Abstract). The Examiner equates the surface layer to Applicant's "skin body". The skin covering is applied to a cloth (column 3, lines 65 - 68 and column 4, lines 1 - 5). Fujita teaches that the surface layer, or "skin body", comprises high polymerization PVC, equated to Applicant's "synthetic resin" and other additives such as titanium oxide as a filler, equated to Applicant's "infrared-ray reflective pigment" (column 2, lines 25 - 55). According to *Knovel Critical Tables*, titanium oxide is an excellent reflector of infrared light.

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As to claim 6, Fujita teaches that the skin covering comprising a surface layer, a foam layer and a back layer (Abstract). The Examiner equates the surface layer to Applicant's "upper layer body" and "upper layer" and the back layer to Applicant's "lower layer" and "lower layer body". Fujita teaches that the surface layer, or "upper layer body/upper layer", comprises high polymerization PVC, equated to Applicant's "synthetic resin" and other additives such as titanium oxide as a filler, equated to Applicant's "infrared-ray reflective pigment". According to *Knovel Critical Tables*, titanium oxide is an excellent reflector of infrared light. Fujita teaches that the back layer, or "lower layer/lower layer body", comprises low polymerization polyvinyl chloride (PVC) and can additionally contain fillers (column 3, lines 20 – 35). Although, Fujita does not specifically teach certain fillers in the paragraph discussing the back layer, Fujita does teach that common fillers include carbon black (column 2, lines 50 – 53). The skin covering is applied to a cloth (column 3, lines 65 – 68 and column 4, lines 1 – 5). According to *Complete Textile Glossary*, a cloth is a generic term embracing all textile fabrics and felts and includes any pliant fabric including knits.

As to claim 1, Fujita discloses the claimed invention except for that the titanium oxide filler is present in the amount of 0.3 parts to 10 parts per 100 parts of synthetic resin. It should be noted that the amount of filler present in the synthetic resin is a result effective variable. For example, as the amount of filler increases, the synthetic resin becomes stronger and has a higher infrared reflectance, thus resistivity, to exposure to the sun. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a skin where the titanium oxide filler is present in the amount of 0.3 parts to 10 parts per 100 parts of synthetic resin since it has been held that discovering an optimum value of a result effective variable

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involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

In the present invention, one would have been motivated to optimize the amount of filler present in the synthetic resin to maximize the infrared reflective capabilities. Additionally, it should be noted that according to *Plastic Additives: An A-Z Reference*, titanium dioxide, a type of titanium oxide, is the most important white pigment used in PVC and the typical amount required can be between 1 and 10 parts of titanium dioxide per 100 parts of PVC.

As to claims 1, 11 and 12, it should be noted that knit fabrics do not have smooth surfaces due to the entanglements of the structure. Therefore, when a coating is applied to the surface of the fabric, the coating will contour the irregularities of the knitted fabric creating the Applicant's recesses and projections. Although Nelson does not explicitly teach the claimed height of the projections is 0.05 mm or more as required by claim 1, is 0.35 mm or less as required by claim 11 and temperature resistance when exposed to a heat source does not exceed 77% of the temperature of the heat source as required by claim 12, it is reasonable to presume that claimed height of the projections is 0.05 mm or more as required by claim 1, 0.35 mm or less as required by claim 11 and temperature resistance when exposed to a heat source does not exceed 77% of the temperature of the heat source as required by claim 12 is inherent to Nelson. Support for said presumption is found in the use of like materials (i.e. a resin coated knitted fabric) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of height of the projections is 0.05 mm or more as required by claim 1, 0.35 mm or less as required by claim 11 and temperature resistance when exposed to a heat source does not exceed 77% of the

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temperature of the heat source as required by claim 12 would obviously have been present once the Nelson product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujita (US 4,781,976) in view of Hutchinson et al. (GB 2,331,525).

Fujita teaches a surface layer, or "skin body", comprising polyvinyl chloride (PVC) and conventional other additives such as plasticizers, stabilizers, catalysts, fillers, pigments and the like (column 2, lines 25 – 37). Fujita teaches that the plasticizers can include phthalic acid esters (column 2, lines 35 – 36) and phosphates (column 2, lines 42 – 44). The plasticizers can be present in the amount of 5 to 80 parts per 100 parts by weight of PVC (column 2, lines 45 – 48). Fujita teaches that the stabilizer used can include Ba-Zn stabilizers (column 2, lines 49 – 50).

Fujita fails to teach that the polyvinyl chloride additionally includes an amine-based stabilizer.

Hutchinson teaches a composition for treating vinyl surfaces for protection against environmental exposure and deterioration caused by ultraviolet light. (Abstract). The composition comprises from 0.01 to 20 weight percent of at least one hundred amine light stabilizer (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use 0.01 to 20 weight percent of at least one hundred amine light stabilizer in the polyvinyl chloride resin motivated by the desire to protect the resin from environmental exposure and deterioration caused by ultraviolet light which is a concern for maintaining the integrity and appearance of trims of automobiles.

Fujita in view of Hutchinson discloses the claimed invention except for that the Ba-Zn stabilizer is present in the amount of 3 parts per 100 parts of the polyvinyl chloride. It should be noted that the amount of Ba-Zn stabilizer is a result effective variable. For example, as the amount of stabilizer increases, the polyvinyl chloride becomes less susceptible to chemical change. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a mixture where the Ba-Zn stabilizer is present in the amount of 3 parts per 100 parts of the polyvinyl chloride since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the amount of Ba-Zn stabilizer in the polyvinyl chloride to maintain the color and thermal stability of the resin.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 6 and 11 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mizukami et al. (US 5,962,349) teaches a double-knitted fabric which can be used for automobile seats in which the face is raised to reduce the obviousness if stained (column 3, lines 42 - 45).

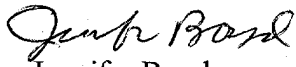


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 703-305-7082. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Jennifer Boyd  
September 17, 2003

